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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,185

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Tomoya Terauchi

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

JOHNSON, CONNIE P

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

02/19/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/584,185	Applicant(s) TERAUCHI ET AL.	
	Examiner CONNIE P. JOHNSON	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 8 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The remarks and amendment filed 11/6/2008 have been entered and fully considered.
2. Claims 1-3, 5, 8 and 9 are presented.
3. Claims 4, 6, 7 and 10 are cancelled per applicants' request.
4. Claims 1, 2, 5 and 9 are amended.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 8 and 9 are rejected under 35 U.S.C. 103(a) as unpatentable over Mase et al., U.S. Patent Publication No. 2002/0192590 A1.

Mase teaches a lithographic printing plate comprising a photosensitive layer. The photosensitive layer comprises a hydrophilic polymer and a light absorbing compound wherein the photosensitive layer is changed from ink-repellant to ink-receptive by irradiation with light (page 2, [0019]). Mase teaches hydrophilic resins with crosslinking groups (page 4, [0048]) and hydrophilic resins with groups that applicant considers "non-crosslinking groups" (page 4, [0046]). However, it is well known in the art that hydrophilic groups are also crosslinking groups. The celluloses, gelatins and polymers obtained by saponification of polyvinylacetate in Mase are representative of applicants'

“resins having no functional groups that can react with a crosslinking agent” (Mase, page 4, [0046] and applicants’ specification, page 23, [0041]). The hydrophilic polymer comprises derivatives of one or more monomers of unsubstituted or substituted (meth)acrylamide, N-vinylformamide and N-vinylacetamide. The hydrophilic polymer is a dispersion with a particle size of 0.005 to 0.5 μ m (page 2, [0023]). The photosensitive layer has a phase separation structure (page 3, [0040]). The phase separation forms a sea-island structure on the surface of the photosensitive layer (page 10, [0127]).

However, the recitation “wherein the surface of the photosensitive layer forms a phase-separation structure, and when the lithographic printing original plate is subjected to printing...” clearly expresses the intended result of a process step and therefore has no patentable weight (MPEP 2111.04). The recitation in claim 1, “...a hydrophilic resin having no crosslinking groups that can react with a crosslinking agent, a melamine resin, organic fine particles and a photothermal conversion material...” (lines 6, 9 and 12 of claim 1) are process limitations and have no patentable weight. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (MPEP 2113). Claim 9 also comprise process limitations and therefore has no patentable weight. Mase teaches a hydrophilic resin with crosslinking groups and is therefore capable of reacting with at least a crosslinking agent, organic particles and a photothermal conversion material as in claim 9. Mase

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does not specifically teach combining a hydrophilic resin with a crosslinking group and a hydrophilic resin with a non-crosslinking group in the photosensitive layer. However, hydrophilic resins are used to improve hydrophilicity in the photosensitive layer.

Specifically Mase points to hydrophilic resins, such as derivatives of N-vinylacetamide and N-vinylformamide, as preferable hydrophilic resins that improve crosslinking, improve balance between hydrophilicity and water resistance qualities and ease of obtaining ink receptivity by irradiation to light (page 4, [0046]). Since the hydrophilic resins of Mase function to increase hydrophilicity, form a balance in water resistance qualities and improve ink receptivity, “the prior art element performs the identical function specified in the claim in substantially the same way, and produces substantially the same results as the corresponding element disclosed in the specification. *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000)” (MPEP 2183). Therefore, it would have been obvious to one of ordinary skill in the art to combine two or more hydrophilic resins comprising derivatives of one or more monomers of unsubstituted or substituted (meth)acrylamide, N-vinylformamide and N-vinylacetamide because Mase teaches combining 2 or more hydrophilic resins to improve hydrophilicity of the photosensitive layer (page 4, [0052]).

7. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mase et al., U.S. Patent Publication No. 2002/0192590 A1 in view of Katano et al., U.S. Patent No. 6,387,588 B1.

Mase teaches a lithographic printing plate comprising a photosensitive layer. The photosensitive layer comprises a hydrophilic polymer and a light absorbing compound wherein the photosensitive layer is changed from ink-repellant to ink-receptive by

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irradiation with light as relied upon above (page 2, [0019]). Mase teaches the photosensitive layer has a phase separation structure (page 3, [0040]). The phase separation forms a sea-island structure on the surface of the photosensitive layer (page 10, [0127]). Mase does not teach that the diameter of each island portion is 0.5 μm or more to 10 μm or less in an area 2500 μm^2 nor that there are 5 or more sea-island structures as in instant claim 2.

However, Katano teaches a printing plate material comprising a recording layer with “F” and “B” polymers. The “F” and “B” polymers are in an island-sea structure. A diameter of the island is preferably 0.05 to 10 μm (col. 12, lines 35-39). Figure 3 shows an island dotted sea structure on a recording layer with 5 or more islands as claimed. Katano teaches that this formation of the island-sea structure prevents stripping of the island comprising the “F” polymer from the recording layer. Katano teaches that the density of the island is not limited as long as the islands are not in contact with each other (col. 12, line 38). Therefore, the area of 2500 μm^2 is not a critical component of the invention, absent any evidence to the contrary. It would have been obvious to one of ordinary skill in the art to use the island-sea formation of Katano in the photosensitive layer of Mase with reasonable expectation of forming a printing plate composition with improved printing durability (col. 12, lines 18-39).

8. Claims 1 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Mase et al., U.S. Patent Publication No. 2002/0192590 A1 in view of Isono et al., U.S. Patent no. 6,093,509.

Mase teaches a lithographic printing plate comprising a photosensitive layer. The photosensitive layer comprises a hydrophilic polymer and a light absorbing compound

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wherein the photosensitive layer is changed from ink-repellant to ink-receptive by irradiation with light (page 2, [0019]). Mase teaches hydrophilic resins with crosslinking groups (page 4, [0048]) and hydrophilic resins with groups that applicant considers “non-crosslinking groups” as relied upon above (page 4, [0046]). Mase does not teach that the hydrophilic resin having no crosslinking group is obtained by further reacting one or more compounds of formula (3) of claim 5.

However, Isono teaches a lithographic printing plate with a hydrophilic layer that has a phase-separated structure (page 4, lines 15-17). The hydrophilic layer comprises a hydrophilic resin that is obtained by polymerizing a hydrophilic group, such as an amine, carboxyl or hydroxyl group (page 8, lines 8-29). The hydrophilic monomer is polymerized with a hydrophilic sulfonic acid group as in claim 5 (page 8, lines 19-25). Isono teaches one or more mixtures of hydrophilic resins are used (page 6, line 45). Therefore, it would have been obvious to one of ordinary skill in the art to replace the hydrophilic monomer groups of Mase with those of Isono to polymerize in the photosensitive layer of Mase with reasonable expectation of improving hydrophilicity of the hydrophilic resin with the non-crosslinkable groups.

Response to Arguments

9. Applicant's arguments filed 11/6/2008 have been fully considered but they are not persuasive.

10. Applicant argues that Mase does not teach a hydrophilic resin for non-crosslinking. Further, that the phase-separation of Mase is derived from a hydrophilic resin for crosslinking and a hydrophobic polymer whereas the phase-separation of the

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claimed invention is derived from two hydrophilic resins (a crosslinking resin and a non-crosslinking resin).

Mase teaches a lithographic printing plate comprising a support and photosensitive hydrophilic resin layer. The photosensitive hydrophilic resin layer comprises:

- a hydrophilic resin with crosslinking groups (page 4, [0048]),
- a hydrophilic resin with non-crosslinking groups (page 4, [0051]),
- a melamine resin (page 5, [0057]),
- a light absorbing compound (page 5, [0059]) and
- organic polymer particles (page 5, [0063]).

Further, Mase teaches combining 2 or more of the hydrophilic resins in the photosensitive layer (page 4, [0052]). Applicant is directed to page 3, [0040] of Mase, wherein the reference discloses that the phase-separation structure is based on a hydrophilic polymer and a hydrophobic polymer. The hydrophobic polymer is representative of the organic fine particles as claimed (page 5, 0063]). In the formation of the photosensitive layer, the hydrophilic polymer resin is crosslinked to form a hydrophilic polymer phase and the hydrophobic particles form a hydrophobic polymer phase. As a result, the photosensitive layer has a phase-separation structure. In the instant invention, “the photosensitive layer acquires a phase-separation structure which is derived from the existence of the organic fine particles and has the same size with the particle size of the organic fine particles of 0.005 to 0.5 μ m. Together with the above described phase-separation structure that produces recessed parts after printing, the

photosensitive layer preferably has two phase-separation structures” (applicants’ specification, page 43, lines 1-10). Therefore, Mase definitely teaches that the phase-separation structure is derived from a hydrophilic resin for crosslinking and organic fine particles as in the instant invention.

11. Applicant argues that comparative example 1 of the instant specification is representative of the composition in the Mase reference. Further, that as evidenced by the results of example 1 and comparative example 1 of the instant specification, the printing properties of the instant invention is superior to those of Mase.

Applicants’ argument of unexpected results is not persuasive. Applicant is directed to Mase, example 1 wherein Mase discloses evaluation of the results of example 1. The evaluation discloses that the exposed plate was set in an off-set printing press using a fountain solution. No scumming occurred on the unirradiated area and ink-receptivity on the irradiated area was not deteriorated after 10,000 printed sheets. Therefore, it is the examiner’s position that the composition of Mase has comparative printing properties with the instant invention. In response to applicant's argument that evidenced by the results of example 1 and comparative example 1 of the instant specification, the printing properties of the instant invention is superior to those of Mase, applicant has not claimed a method of making the printing plate composition, only a composition. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CONNIE P. JOHNSON whose telephone number is (571)272-7758. The examiner can normally be reached on 7:30am-4:00pm Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Connie P. Johnson/
Examiner, Art Unit 1795

/Cynthia H Kelly/

Supervisory Patent Examiner, Art Unit 1795